



DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY
AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474
T (786) 315-2590 F (786) 315-2599

www.miamidade.gov/building

NOTICE OF ACCEPTANCE (NOA)

Nucor Building Systems
200 Whetstone Road
Swansea, SC 29160

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: VR-16, 0.0245" min. Structural Galvalume Steel Roof Panel

APPROVAL DOCUMENT: Drawing #1446, titled "VR-16, 24 Gage Structural Galvalume Steel Roof System", sheets 1 through 4 of 4, dated June 01, 2006, last revision #5 dated November 29, 2011, prepared, signed and sealed by Bala Sockalingam, P.E., bearing the Miami-Dade County Product Control Revision stamp with the Notice of Acceptance number and the expiration date by the Miami-Dade County Product Control Section.

MISSILE IMPACT RATING: Large and Small Missile Impact Resistant

LABELING: Each panel shall bear a permanent label with the manufacturer's name or logo, city, state and the following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA # 06-0803.04 and consists of this page 1, evidence submitted pages E-1 & E-2 as well as approval document mentioned above.

The submitted documentation was reviewed by Helmy A. Makar, P.E., M.S.



Helmy A. Makar
01/05/2012

NOA No. 11-1017.04
Expiration Date: 09/13/2012
Approval Date: 01/05/2012
Page 1

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

1. EVIDENCE SUBMITTED UNDER PREVIOUS APPROVAL # 06-0803.04

A. DRAWINGS

1. *Drawing #1446, titled "VR-16, 24 Gage Structural Galvalume Steel Roof System", sheets 1 through 4 of 4, dated June 01, 2006, last revision #3 dated July 22, 2007, prepared, signed and sealed by Bala Sockalingam, P.E.*

B. TESTS

1. *Test reports on 1) Uniform Static Air Pressure Test, Loading per ASTM E1592 and 2) Large Missile Impact Test per TAS 201 along with marked-up drawings and installation diagram 24 GA 16" steel roof panel, prepared by Hurricane Test Laboratory, Inc., Test Report No. 0420-0216-06 and 0420-0313-06, dated 05/25/2006, signed and sealed by Vinu J. Abraham, P.E.*
2. *Test reports on 1) Wind and Wind Driven Rain Resistance of Discontinuous Roof Systems, TAS 100-95 along with marked-up drawings and installation diagram 24 GA 16" steel roof panel, prepared by Asphalt Technologies, Inc., Test Report No. NBS-002-02-01, dated 03/30/2006, signed and sealed by Charles L. Thomas, P.E.*
3. *Test reports on 1) Uniform Static Air Pressure Test, Loading per ASTM E1592 along with marked-up drawings and installation diagram 24 GA 16" steel roof panel, prepared by Hurricane Test Laboratory, Inc., Test Report No. 0420-0610-07, dated 07/12/2007, signed and sealed by Vinu J. Abraham, P.E.*
4. *Accelerated weathering per ASTM G153.*
5. *Test Report for Suseptability to Leakage for roof system assemblies per TAS-114, dated 04/03/2006, signed and sealed by Charles L. Thomas, P.E.*
6. *Salt Spray test per ASTM B117.*

C. CALCULATIONS

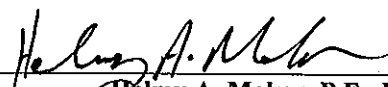
1. *Fasteners Calculations and structural analysis, prepared by Bala Sockalingam, P.E., dated 07/07/2006, signed and sealed by Bala Sockalingam, P.E.*
2. *Fasteners Calculations and structural analysis, prepared by Bala Sockalingam, P.E., dated 07/24/2007, signed and sealed by Bala Sockalingam, P.E.*

D. QUALITY ASSURANCE

1. *By Miami-Dade County Building Code Compliance Office.*

E. MATERIAL CERTIFICATION

1. *Mill Certificate, prepared by Wheeling Nisshin, dated 01/09/2006.*
2. *Tensile Test prepared by QC Metallurgical, Inc., Project No. 6FM-501, dated 06/19/2006, for steel samples, tested per ASTM E8-00, signed and sealed by Frank Grate, P.E.*



Helmy A. Makar, P.E., M.S.
PERA, Product Control Unit Supervisor
NOA No. 11-1017.04
Expiration Date: 09/13/2012
Approval Date: 01/05/2012

NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED

2. NEW EVIDENCE SUBMITTED

A. DRAWINGS

1. *Drawing #1446, titled "VR-16, 24 Gage Structural Galvalume Steel Roof System", sheets 1 through 4 of 4, dated June 01, 2006, last revision #5 dated November 29, 2011, prepared, signed and sealed by Bala Sockalingam, P.E.*

B. TESTS

1. *None.*

C. CALCULATIONS

1. *None.*

D. QUALITY ASSURANCE

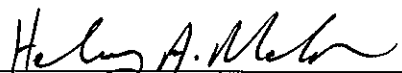
1. *By Miami-Dade County Department of Permitting, Environment, and Regulatory Affairs (PERA).*

E. MATERIAL CERTIFICATION

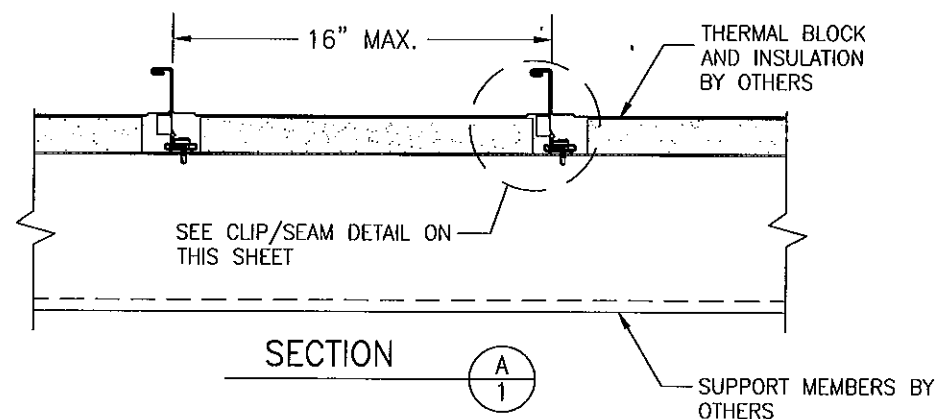
1. *None.*

F. OTHERS

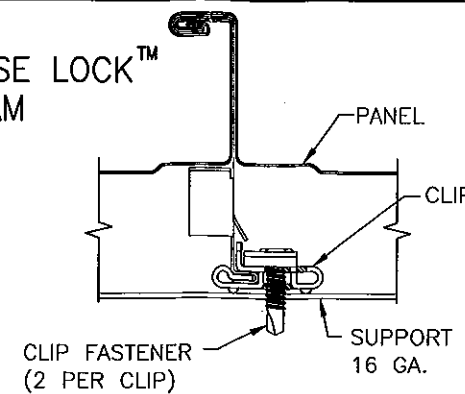
1. *Florida Building Code, 2007 and 2010 editions compliance letter by ENCON Technology, Inc., dated December 01, 2011, signed and sealed by Bala Sockalingam, P.E.*



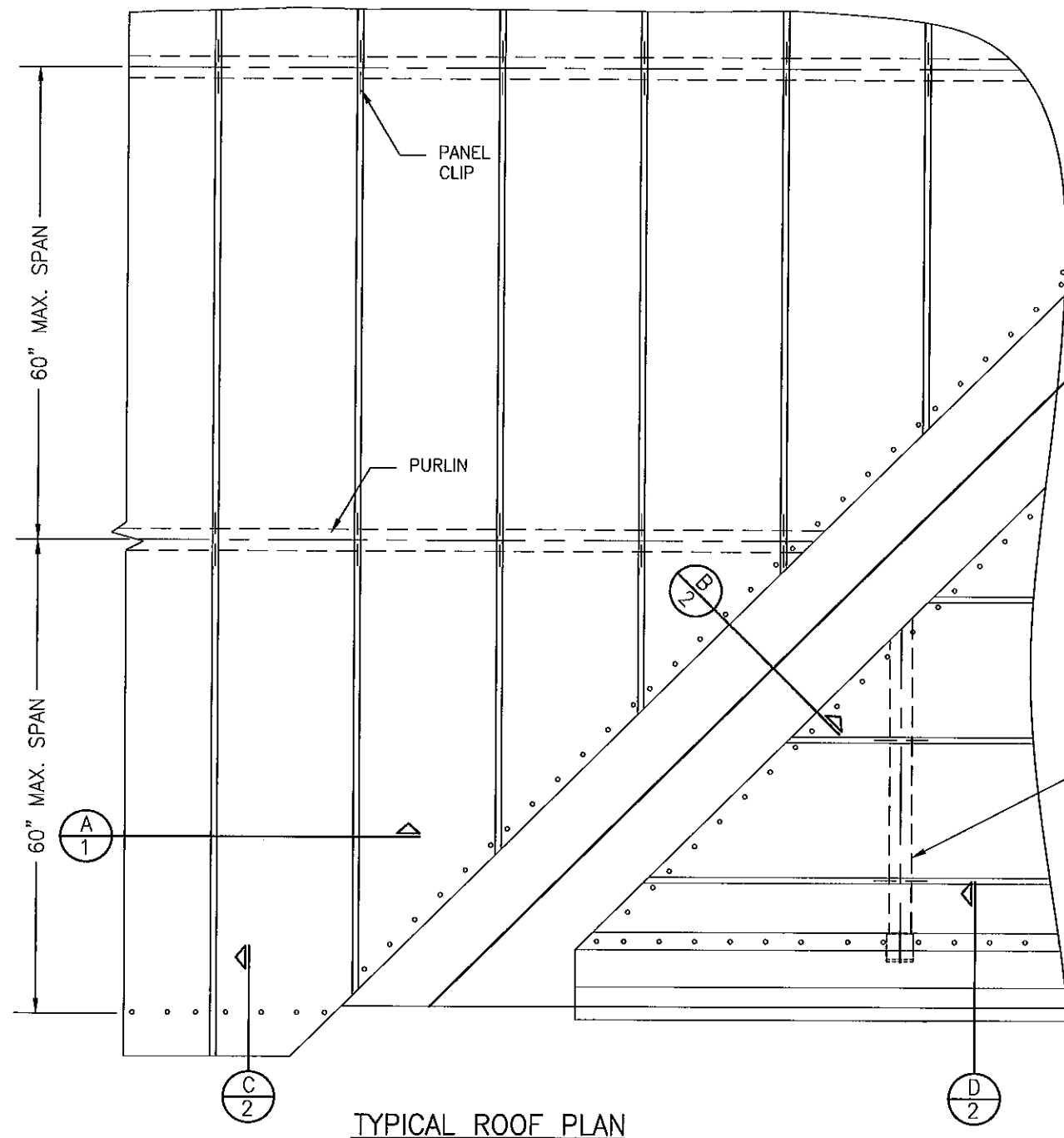
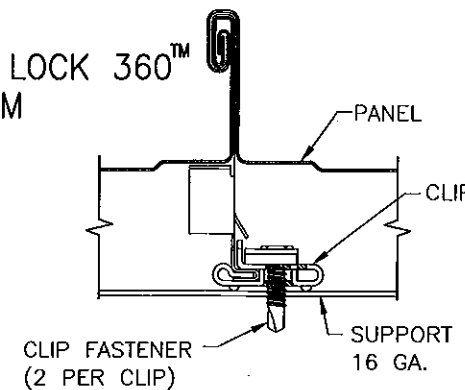
Helmy A. Makar, P.E., M.S.
PERA, Product Control Unit Supervisor
NOA No. 11-1017.04
Expiration Date: 09/13/2012
Approval Date: 01/05/2012



NUCOR VISE LOCK™ SEAM



NUCOR VISE LOCK 360™ SEAM



PURLINS AT MAX. 5'-0" O.C. BY OTHERS (MIN. 16 GA. STEEL MEMBER REQUIRED PER GENERAL NOTE #9)

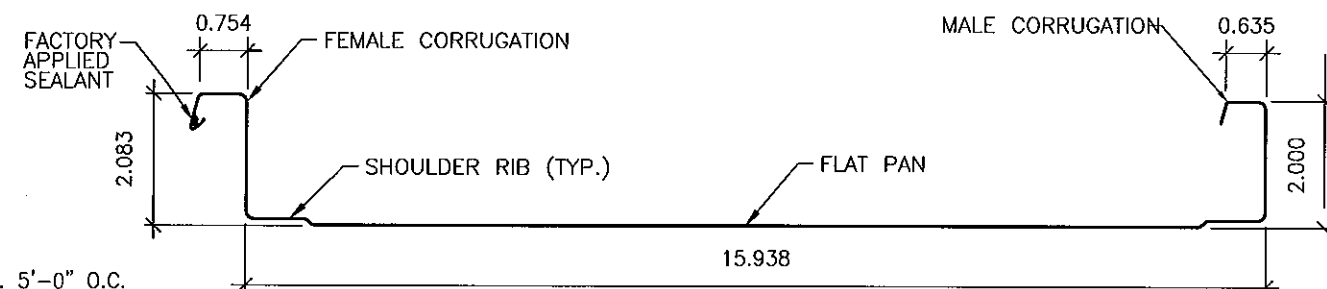
PRODUCT APPROVAL IS LIMITED TO THE ROOF PANEL & ITS CONNECTING CLIPS. THE STRUCTURAL ADEQUACY OF ALL OTHER STRUCTURAL ITEMS (BEAMS, COLUMNS, PURLINS, FACIA SUPPORTS, CONNECTIONS OF STRUCTURE, ETC.) SHALL BE VERIFIED BY THE STRUCTURAL PLANS EXAMINER OF THE CORRESPONDING BUILDING DEPARTMENT. THE METAL ROOF PANELS SHALL NOT BE DESIGNED TO ACT AS A DIAPHRAGM.

GENERAL NOTES:

- THIS STRUCTURAL ROOF PANEL SYSTEM HAS BEEN DESIGNED IN ACCORDANCE WITH 2007 AND 2010 FLORIDA BUILDING CODE (FBC). FOR USE WITH 2010 FBC, THE DESIGN PRESSURES AS DETERMINED FROM SECTION 1620 AND ASCE 7-10 MUST BE MULTIPLIED BY 0.6.
- ROOF PANELS ARE FABRICATED FROM A MAX. 22.25" WIDE COIL & SHALL BE 24 GA. ($t = 0.0245$ ") ASTM 792 GRADE D STEEL WITH A SILICONIZED POLYESTER COATING APPLIED. EFFECTIVE COVERING WIDTH OF PANEL = MAX. 16". $F_y = 56.4$ ksi (MIN.)
- THE ROOF PANELS SHALL BE INSTALLED OVER ROOF STRUCTURE AS SPECIFIED ON THESE DRAWINGS.
- PANEL END OVERLAPS MAY OCCUR WITHIN 12" OF SUPPORTING PURLIN WEB PROVIDING THE END LAPS ARE CONSTRUCTED, SUPPORTED & SEALED PER THE END LAP DETAIL ON SHEET 3.
- REQUIRED DESIGN WIND LOADS SHALL BE DETERMINED FOR EACH PROJECT.
- THIS ROOFING PANEL SYSTEM HAS BEEN TESTED IN ACCORDANCE WITH FLORIDA BUILDING CODE:
 - * ACCELERATED TESTING OF COATING PER ASTM G153
 - * SALT SPRAY TESTING PER ASTM B117
 - * UPLIFT RESISTANCE TEST PER TAS-125 & ASTM E1592
 - * WIND DRIVEN RAIN & STANDING WATER TESTS PER TAS-100 & TAS-114
 - * TENSILE TESTS PER ASTM E8
- ROOF PANEL MANUFACTURER'S PERMANENT LABEL SHALL BE PLACED AT THE END OF EACH PANEL RUN AND SHALL READ: NUCOR BUILDING SYSTEMS
SWANSEA, SOUTH CAROLINA
MIAMI-DADE COUNTY PRODUCT CONTROL
APPROVED
- ALL SCREWS SHALL BE CORROSION RESISTANT SELF DRILLING SCREWS.
- THE SUPPORTING STRUCTURE, OVER WHICH THE PANELS ARE TO BE INSTALLED, MUST BE MINIMUM 16 GAGE (MIN. 0.0598") STEEL WITH MIN. $F_y = 50$ KSI.
- MAXIMUM POSITIVE AND NEGATIVE DESIGN LOADS FOR 24 GA. VR-16 WITH NUCOR VISE LOCK™ OR NUCOR VISE LOCK 360™ SEAM IN THE ROOF FIELD, PERIMETER AND CORNER ZONES SHALL BE THE LOWEST DESIGN LOAD CALCULATED BASED ON THE PANEL ALLOWABLES AND CLIP TYPE SHOWN. MAXIMUM ALLOWABLE DEFLECTION LIMIT = $L/240$.

PANEL ALLOWABLES	FOR POSITIVE LOAD *	FOR UPLIFT LOAD *	
	ALL SEAM TYPES	NUCOR VISE LOCK™	NUCOR VISE LOCK 360™
M (SUPPORT) (lb.ft/ft)	125	86	111
M (SPAN) (lb.ft/ft)	100	69	89
REACTION (lb/ft)	275	189	244
EI (lb.in ³ /ft)	4074248	1654505	2246583

* SEE NOTE 10.



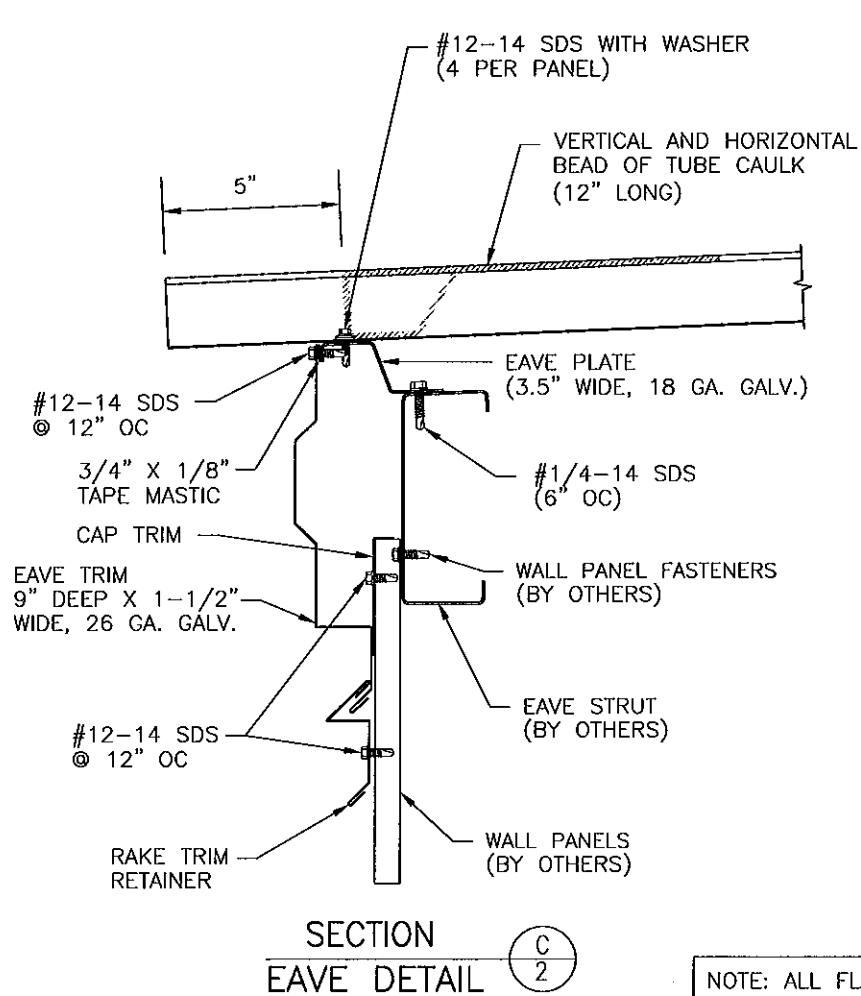
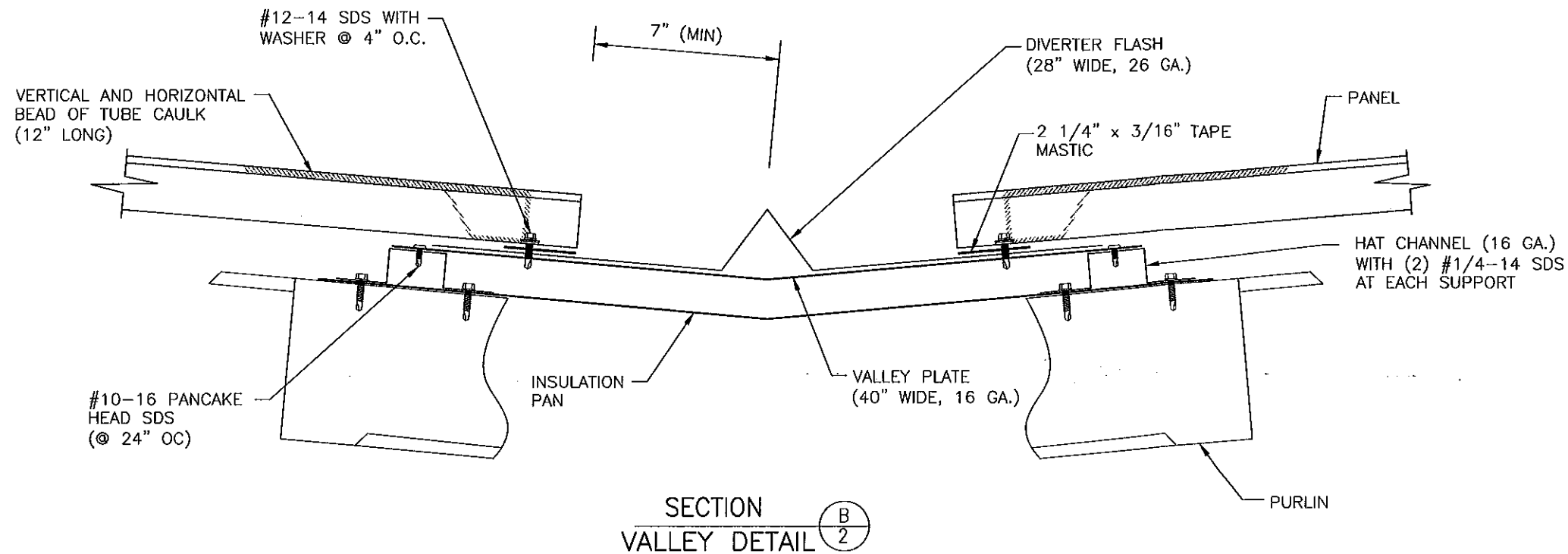
TYPICAL PANEL PROFILE

24 GA. GALVALUME COATED STEEL WITH PAINTED FINISH ($t = 0.0245$ " MIN.)

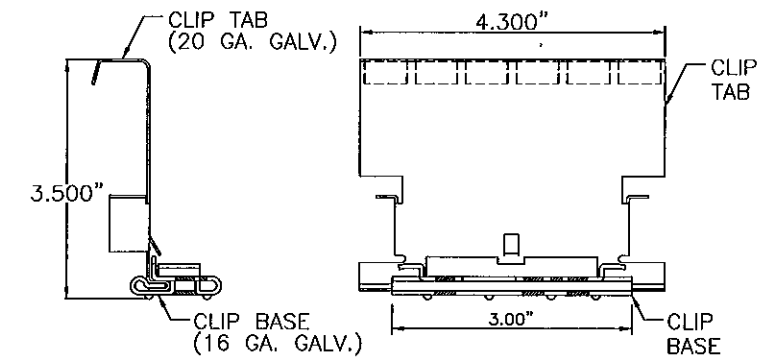
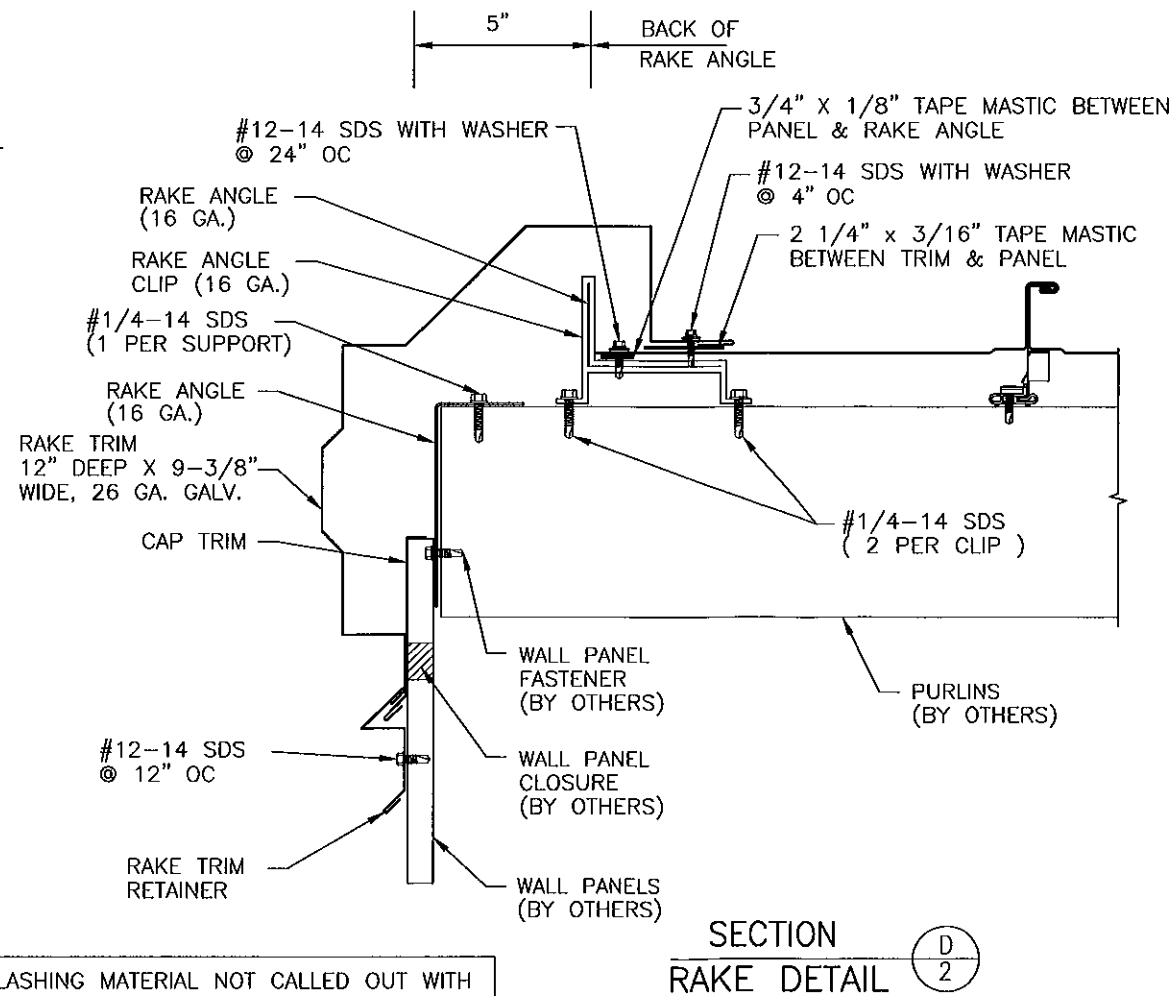
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No. 11-1017.04
Expiration Date 04/13/2012
By *Heather A. Miller*
Miami Dade Product Control

DRAWN BY: B.S.		CHECKED BY: A.B.	
PLOT:		DATE: 11/29/11	
NO.	REVISION DESCRIPTION	BY	DATE
1	REVISE NOTES 2 & 10.	BS	6.22.07
2	ADD THICKNESS	BS	6.22.07
3	CHANGE SEAM NAMES	BS	7.22.07
4	REVISE NOTE 1 & ADD.	BS	9.30.11
5	REVISE NOTE 1	BS	11.29.11

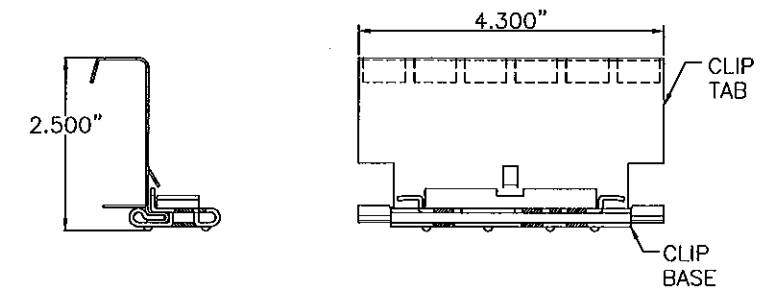
DRAWING TITLE VR-16, 24 GAGE STRUCTURAL GALVALUME STEEL ROOF SYSTEM		MANUFACTURER NUCOR BUILDING SYSTEMS 200 WHETSTONE ROAD SWANSEA, SC 29160 803-568-2100	
CONSULTANTS BALA SOCKALINGAM, PH.D., P.E. 1216 N LANSING AVE, SUITE C TULSA, OK 74106 PHONE: 918-492-5992 FAX: 866-366-1543		CERTIFICATION <i>Heather A. Miller</i> 11-30-2011 BALA SOCKALINGAM, P.E. P.E. NO. 62240	
DRAWING NO. 1446		REV. B	
SHEET NO. 1 OF 4			



NOTE: ALL FLASHING MATERIAL NOT CALLED OUT WITH A SPECIFIC GAGE THICKNESS SHALL BE MIN. 26 GAGE.



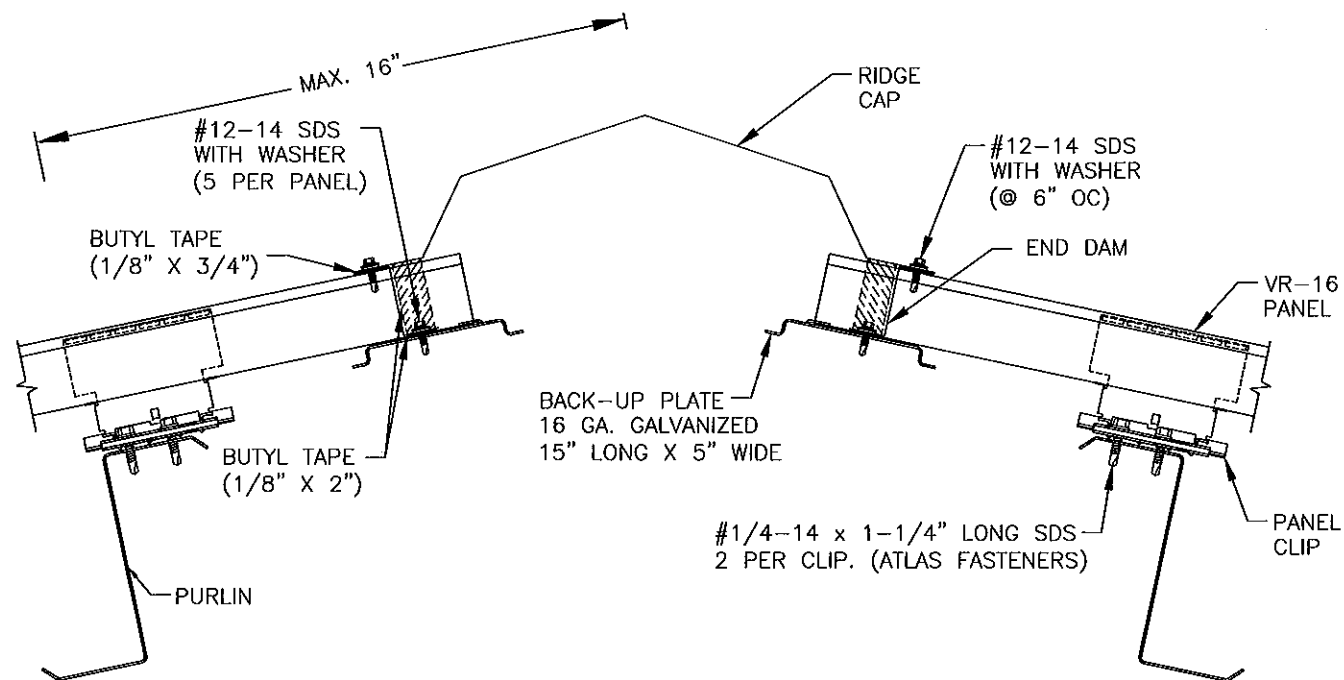
USED WITH 6" THICK INSULATION & THERMAL BLOCKS



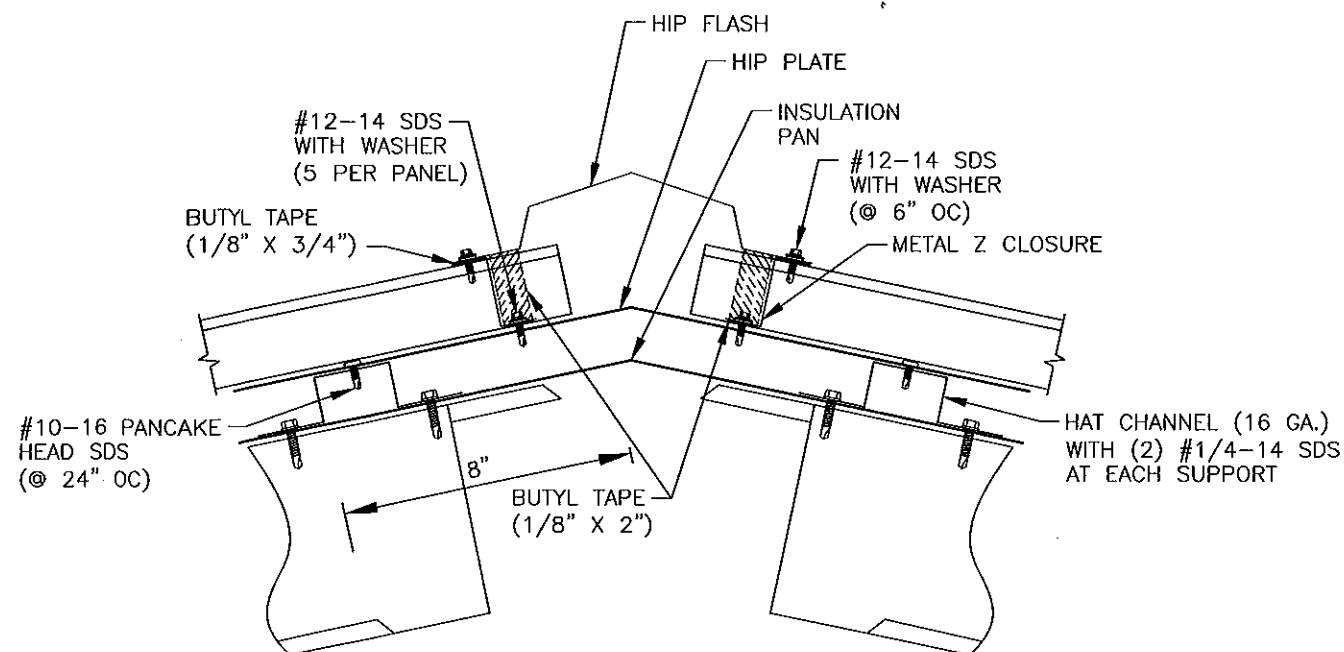
USED WITH 4" THICK INSULATION
PANEL CLIP

PRODUCT REVISED
as complying with the Florida
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Acceptance No. 11-1017.04
Expiration Date 9/13/2012
By *Heather A. Miller*
Miami Dade Product Control

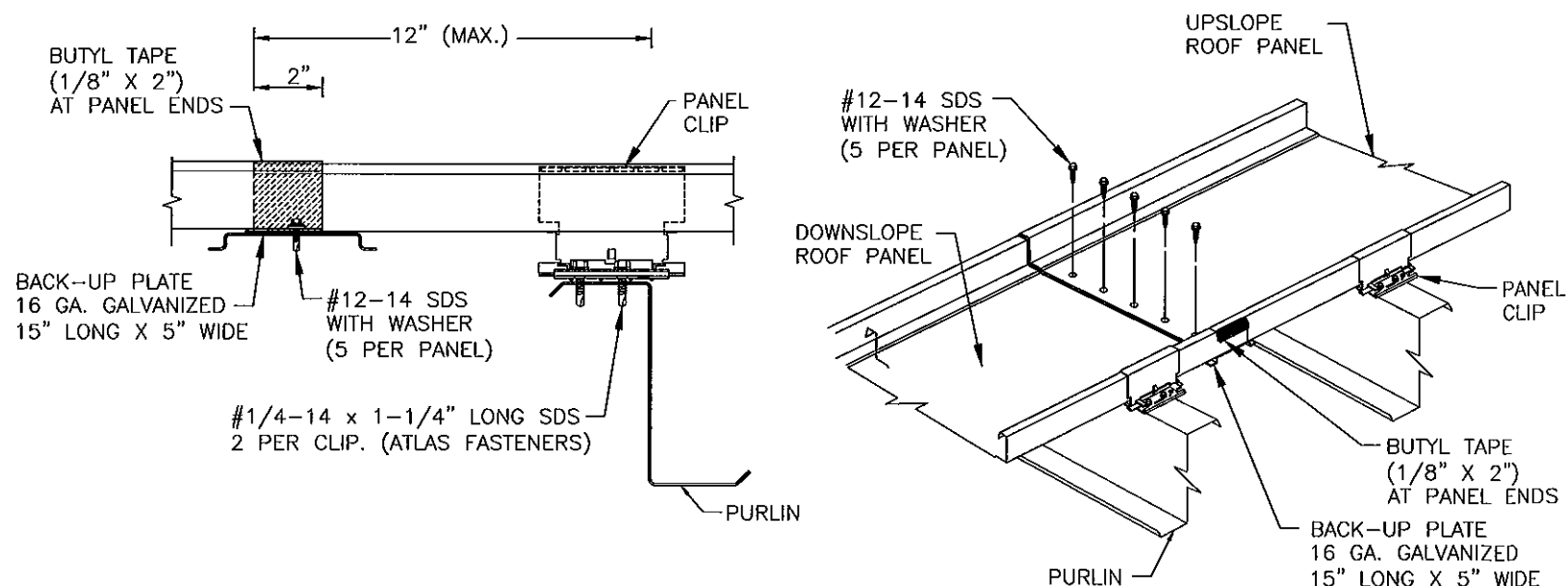
DRAWN BY: B.S.		CHECKED BY: A.B.	
PLOT:		DATE: 9/30/11	
REVISION	DATE	BY	DESCRIPTION
1	6.22.07	BS	REVISE SECTION B, C & D
2	9.30.11	BS	REVISE ADD.
DRAWING TITLE: VR-16, 24 GAGE STRUCTURAL GALVALUME STEEL ROOF SYSTEM			
CONSULTANTS: NUCOR BUILDING SYSTEMS			
200 WHETSTONE ROAD			
SWANSEA, SC 29160			
803-568-2100			
CONSULTANTS: BALA SOCKALINGAM, PH.D., P.E.			
1216 N LANSING AVE, SUITE C			
TULSA, OK 74106			
PHONE: 918-492-5992 FAX: 866-366-1543			
CERTIFICATION: <i>Heather A. Miller</i> 11.30.2011			
DRAWING NO. 1446			
SHEET NO. 2 OF 4			



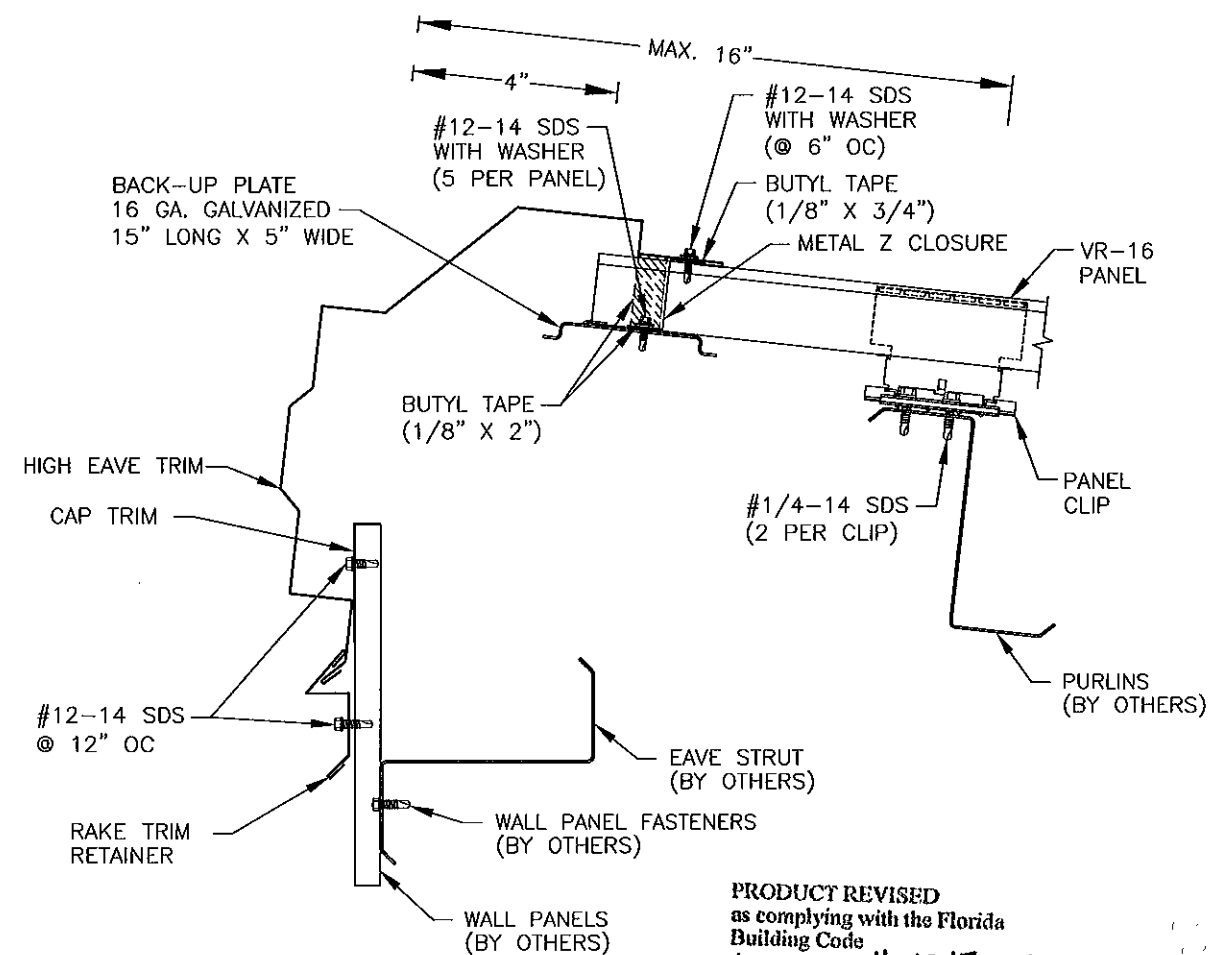
RIDGE DETAIL



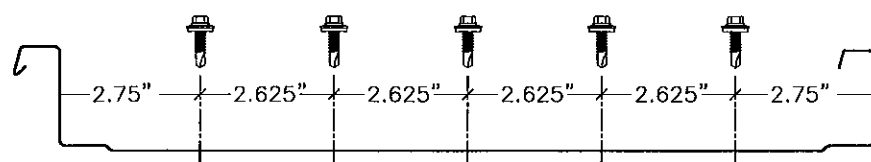
HIP DETAIL



END LAP DETAILS



HIGH EAVE DETAIL



FASTENER PATTERN AT ENDLAP

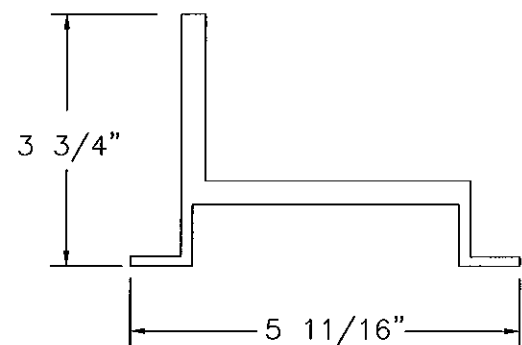
NOTE: ALL FLASHING MATERIAL NOT CALLED OUT WITH A SPECIFIC GAGE THICKNESS SHALL BE MIN. 26 GAGE.

DATE	BY	REVISION DESCRIPTION	NO.
6.22.07	BS	ADD SDS LENGTH (RIDGE)	1
6.22.07	BS	ADD 'MAX' TO ENDLAP	2
9.30.11	BS	REVISE ADD.	3

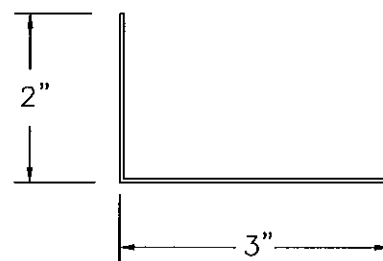
DRAWING TITLE		VR-16, 24 GAGE STRUCTURAL GALVALUME STEEL ROOF SYSTEM	
CONSULTANTS		BALA SOCKALINGAM, PH.D., P.E.	
MANUFACTURER		NUCOR BUILDING SYSTEMS	
1216 N LANSING AVE, SUITE C		200 WHETSTONE ROAD	
TULSA, OK 74106		SWANSEA, SC 29160	
PHONE: 918-492-5992		803-568-2100	

CERTIFICATION	11.30.2011
DRAWING NO.	1446
REV.	B
SHEET NO.	3 OF 4

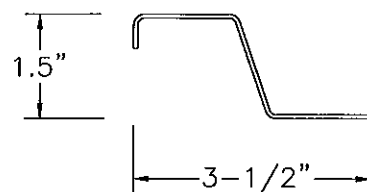
PRODUCT REVISED
as complying with the Florida
Building Code
Acceptance No 11-1017.04
Expiration Date 09/13/2012
By *Heidi A. Miller*
Miami Dade Product Control



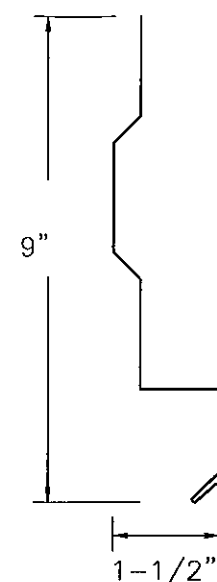
RAKE ANGLE CLIP
(16 GA. GALV.)



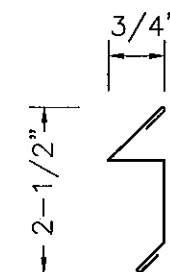
RAKE ANGLE
(16 GA. GALV.)



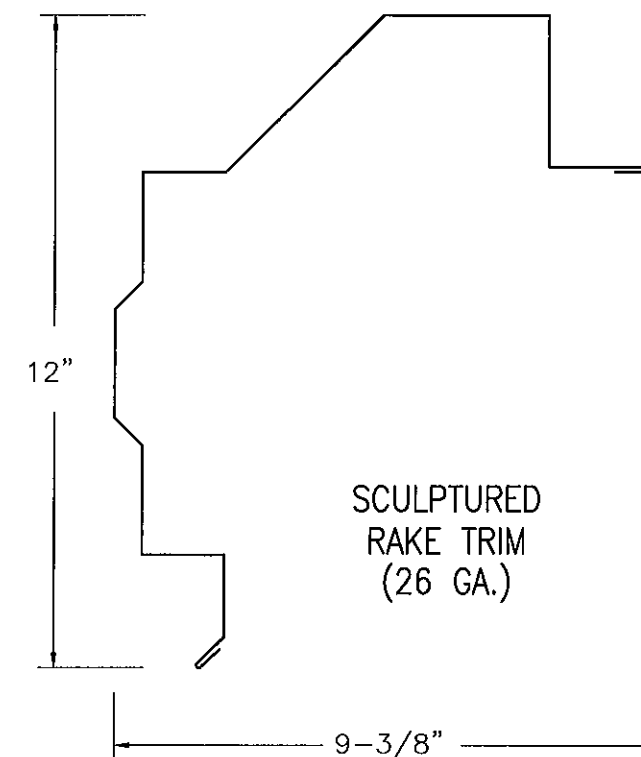
EAVE PLATE
(18 GA. GALV.)



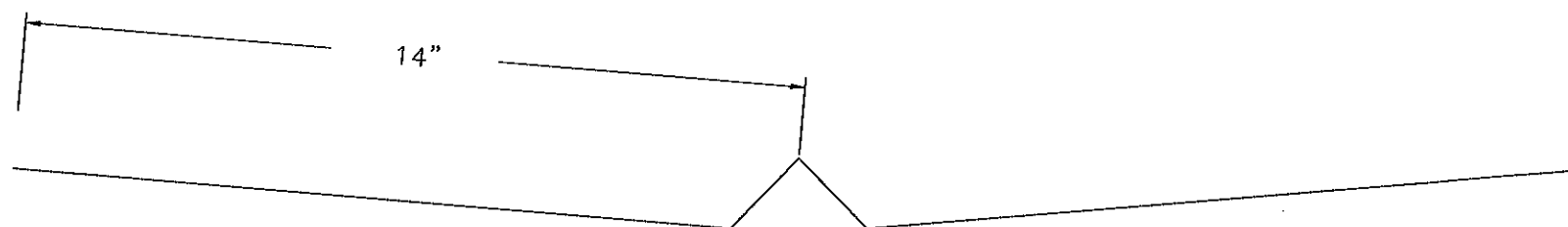
EAVE TRIM
(26 GA.)



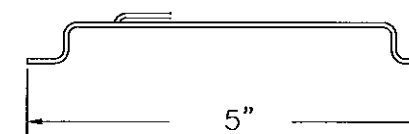
RAKE RETAINER
TRIM
(26 GA.)



SCULPTURED
RAKE TRIM
(26 GA.)

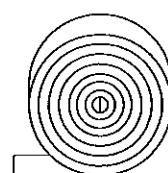


DIVERTER FLASH
(26 GA.)

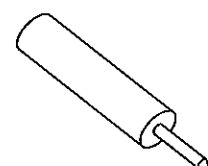


BACK-UP PLATE
(16 GA. GALV.)

ALL FLASHING MATERIAL -
ALUMINUM/ZINC COATED STEEL



TAPE SEALANT
(3/4"x1/8"x50') Butyl
(2-1/4"x3/16"x20') Butyl
(2"x1/8"x22") Butyl



TUBE SEALANT



CLIP FASTENER
1/4-14 SDS
1-1/4" LONG



FLASHING/PERIMETER
FASTENER
12-14 SDS WITH WASHER
1-1/4" LONG

PRODUCT REVISED
as complying with the Florida
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Acceptance No. 11-1017-04
Expiration Date 04/13/2012
By *Helmut A. H. H.*
Miami Dade Product Control

DRAWN BY: B.S.		CHECKED BY: A.B.	
PLOT:		DATE: 9/30/11	
NO.	REVISION DESCRIPTION	BY	DATE
1	NEW DRAWING	BS	6.22.07
2	REVISE ADD.	BS	9.30.11
DRAWING TITLE VR-16, 24 GAGE STRUCTURAL GALVALUME STEEL ROOF SYSTEM			
CONSULTANTS BALA SOCKALINGAM, PH.D., P.E. 1216 N LANSING AVE, SUITE C TULSA, OK 74106 PHONE: 918-492-5992 FAX: 866-366-1543		MANUFACTURER NUCOR BUILDING SYSTEMS 200 WHETSTONE ROAD SWANSEA, SC 29160 803-568-2100	
CERTIFICATION <i>Helmut A. H. H.</i> 11.30.2011 BALA SOCKALINGAM, P.E. P.E. NO. 62240			
DRAWING NO. 1446		REV. B	
SHEET NO. 4 OF 4			